Volume 3 Issue 1

Winter 2003

Communicable Disease Control UPDATE

MECKLENBURG COUNTY HEALTH DEPARTMENT

Disease Detectives

Shigella—Story of an Outbreak

Mecklenburg County's most recent *Shigellosis* outbreak began quietly in the summer of 2002 and slowly became the largest recorded outbreak of this illness in the county and the state.

The Index Case

The index, or first case of *Shigellosis* identified in the outbreak, was a male who visited a local emergency department on July 30, 2002 with complaints of bloody diarrhea, vomiting and chest pain. Hospital records show that this individual's stool was cultured because of the presence of blood, but he was released from the hospital without learning of his positive stool culture report for *Shigella sonnei*. He was difficult to locate since he was unemployed and his telephone had been disconnected. The investigating nurse visited the address the index gave to the hospital and found a vacant, dilapidated house that belonged to a neighborhood church. A van parked in the driveway had the name and phone number of the church on its side. The nurse left information on *Shigellosis* and a letter in the mailbox asking the man to call. A message was left on the church's voicemail asking someone to call the Health Department. Several days passed and neither the church nor the index case responded to the request for a return call.

The Outbreak

Three days later, on August 2nd, another positive lab report of *Shigellosis* was received by the Health Department. This time, the case was a teacher in a local daycare. This teacher began to have diarrhea on her last day of work at the daycare center and visited a hospital emergency department for treatment over the weekend. She started work at another daycare center the following Monday but was sent home after having diarrhea and vomiting shortly after she arrived at her new job. Ultimately, this teacher exposed 72 staff and children to *Shigellosis* at two different daycare centers. The MCHD required stool testing for all of the children and staff at both centers as well as any of their symptomatic contacts who were involved in high-risk occupations. A total of 5 people tested positive for *Shigellosis* after exposure to this one positive staff member. One of the symptomatic contacts identified during the first round of testing attended another large daycare in the Charlotte area. The MCHD cultured 106 children, staff and symptomatic contacts at this daycare center and identified 13 positive new cases of *Shigellosis*.

The Investigation

On August 13, 2002 an unexpected call was received from the index case. He heard that "someone was trying to get in touch "with him. He reported that he stayed briefly with a friend who had a pre-school age child who had recently been ill with diarrhea. He believed that he contracted *Shigellosis* from the sick child. Further investigation determined that in addition to the index, 3 additional confirmed cases of the illness were directly related to this child. Although not confirmed, a cousin of this child was hospitalized with *Shigellosis*-type symptoms.

The Numbers

Only 28 cases of *Shigellosis* were reported in Mecklenburg County in the year 2000. Thirty-three cases were reported for the year 2001. Records compiled from January through July 2002 show only 9 reported cases of *Shigellosis* in the county. Since the homeless man was diagnosed with *Shigellosis* in early August 2002, more than 600 cases of the illness have been investigated, 123 daycare centers have been identified as having positive children/staff, and 84 public schools have children in attendance who have been diagnosed with *Shigellosis*. Additional initiatives by Health Department staff such as on-site visits to daycares in those zip codes most affected by the illness, increased educational programs by school nurses in their schools, and an instructional handwashing video sent to all 900+ childcare centers have been effective in decreasing the incidence of *Shigellosis* in the county.

For Mecklenburg County Health Department's enteric exclusion policy, see page 2 of the *Update* or go to the Communicable Disease Control website at www.meckhealth.org. For statistical information on the outbreak, see page 4 of the *Update*.

For more information on the *Shigella* outbreak, contact Gail Mills at millsgb@co.mecklenburg.nc.us or 704.336.5076.

Enteric Exclusion Policy/Mecklenburg County

Child Care Center

Shigellosis—All children or workers must be excluded from the center until two consecutively negative stools (taken not less than 24 hours apart and at least 48 hours after being off antibiotics if treated) are obtained. The Communicable Disease Control nurse from the MCHD must release the child or worker to return to the child care center. A release from the physician is not sufficient. All children attending a pre-K program are subject to this same exclusion policy.

Salmonellosis— All symptomatic and asymptomatic children who are in diapers and not fully toilet trained** must be excluded from the center until two consecutively negative stools (taken not less than 24 hours apart and at least 48 hours after being off antibiotics if treated) are obtained. The Communicable Disease Control nurse from the MCHD must release the child or worker to return to the child care center. A release from the physician is not sufficient.

Adult workers and toilet trained children who are symptomatic must remain out of the center and may return when they are asymptomatic. They will be monitored until two consecutively negative stools (taken not less than 24 hours apart and at least 48 hours after being off antibiotics) are obtained.

E. coli, Shiga toxin-producing infection—All children or workers must be excluded from the center until two consecutively negative stools (taken not less than 24 hours apart and at least 48 hours after being off antibiotics if treated) are obtained. The Communicable Disease Control nurse from the MCHD must release the child or worker to return to the child care center. A release from the physician is not sufficient.

Campylobacter infection—All children who are having symptoms must remain out of daycare until they are no longer having symptoms. Generally a follow-up stool culture test is not necessary to return to daycare. A release from the Communicable Disease Control nurse is not necessary.

Adult workers should remain out of work while they are having symptoms and may return to work when they are asymptomatic without a follow-up stool test or release from the Communicable Disease Control nurse.

Foodhandler

Shigellosis—All workers must be excluded from food handling until two consecutively negative stools (taken not less than 24 hours apart and at least 48 hours after being off antibiotics if treated) are obtained. The Communicable Disease Control nurse from the MCHD must release the foodhandler to return to work. A release from the physician is not sufficient.

Salmonellosis— All symptomatic individuals are excluded from food handling and may return when they are asymptomatic. They will be monitored until two consecutively negative stools (taken not less than 24 hours apart and at least 48 hours after being off antibiotics if treated) are obtained.

The definition of "fully toilet trained " is no more than 2 incontinent stools per week.

E. coli, Shiga toxin-producing infection—All workers must be excluded from food handling until two consecutively negative stools (taken not less than 24 hours apart and at least 48 hours after being off antibiotics if treated) are obtained. The Communicable Disease Control nurse from the MCHD must release the foodhandler to return to work. A release from the physician is not sufficient.

Campylobacter infection—All symptomatic individuals are excluded from food handling and may return to work when they are asymptomatic. Generally no follow-up stool culture is required and a release to return to work from the Communicable Disease Control nurse is not necessary.

Note: School-age children should be excluded from school while they are symptomatic and may return when asymptomatic without a follow-up stool test or release from the Communicable Disease Control nurse for all of the above conditions.

Syphilis Elimination Project Success!

The Syphilis Elimination Project has completed its third year of efforts to eradicate syphilis from Mecklenburg County. The program began in late 1998 with a syphilis case rate of 11% per 100,000 (population based on 1990 census year). Through the fourth quarter of 2002, the program showed a case rate of 3% per 100,000 population. This significant decrease was accomplished through a series of yearlong activities orchestrated by the Syphilis Elimination Task Force (SETF). The SETF, that includes the Mecklenburg County Health Department, State Health Department, Mecklenburg County Jail System, Carolinas Medical Center and other community based organizations (CBO's), collaborated to provide testing for syphilis, HIV and other STD's.

Aggressive media advertising was expanded to include more radio spots, hip-hop magazines and newspapers, TV ads and interviews. In all of the media advertising, the **704-432-TEST** hot line was promoted. Calls to the hotline began to increase accordingly. The majority of calls to the hotline were due to radio and TV ads. Calls to the hotline were received from all over Mecklenburg County and surrounding counties. Referrals for testing were made to both health departments and non-traditional testing sites sponsored by Metrolina AIDS Project (MAP).

Outreach activities for the 2002 program year consisted of several health fairs in high morbidity areas, testing at shelters, faith-based organizations, and Hispanic outreach. Over 1000 people were tested at these events. The majority of people seeking syphilis tests were also tested for HIV. Over 10,000 condoms were distributed during these outreach activities including designated condom distribution sites. Over 2000 STD/HIV brochures in English and Spanish were distributed to several communities.

Our jail-testing program for syphilis began in September 2002. By the end of the year, over 1,600 inmates received comprehensive STD/HIV education and nearly 600 were tested for syphilis. The jail population is one that is considered high risk for syphilis; therefore, two health educators have been hired to work in the jails several days during the week. One educator is fluent in the Spanish language and the other is trained in meeting the educational needs of female inmates.

Future activities include more intensive street outreach in high morbidity areas to provide door-to-door education and testing. The door-to-door outreach (Intensive Community Education Efforts -- ICEE) will be conducted in early March. The SETF will be collaborating with new CBO's to join our efforts in testing more at-risk populations. We will develop new media awareness campaigns to include prime time TV spots and ads in targeted movie theatres.

The Syphilis Elimination Project is well on the way to achieving its goal of eradicating syphilis from Mecklenburg County.

For more information, contact Ann White at whiteac@co.mecklenburg.nc.us or 704.432.1506.

FAQ

Q. **What does the Health Department recommend for treating positive Shigella cases?**

A. The Health Department currently recommends treating newly diagnosed cases of Shigellosis with 10 days of Trimethoprim-Sulfamethoxazole (TMP-SMX). Five days of Suprax (Cifixine) is used to treat Shigellosis if the isolate is resistant to TMP-SMX or if the patient cannot take TMP-SMX. A small percentage (<.05%) of cases have remained positive for Shigella after treatment with TMP-SMX and Cefixine. All of these cases have eventually cleared the infection.

Q. **Is the Health Department still distributing KI to residents who live in high risk areas?**

A. KI is still being distributed at the following locations:

- ★ Cornelius Police Department
  21440 Catawba Avenue
  704.892.1363
- ★ Davidson Town Hall
  216 S. Main Street
  704.8927591
- ★ Huntersville Library
  16500 Holly Crest Lane
  704.895.0318
- ★ Fighting Back
  2845 Beatties Ford Road
  704.336.6400

Anyone interested in picking up KI at any of these sites should call first.

Q. **Does the Health Department provide post-exposure rabies vaccine? What about Td?**

A. The Health Department does not provide post-exposure rabies vaccine but does give Td. Post-exposure rabies vaccine can be obtained in any of the hospital emergency departments. Td is given in the Health Department clinics. Appointments can be made by calling 704.336.6500.

Norovirus—Old Virus...New Name

Norovirus, formerly known as Norwalk Virus, is spread through food, as well as person-to-person. There are indications that there may be an elevated level of this virus in the community. There has been large media coverage of outbreaks on various cruise ships, nursing homes and hospitals dating back to January 2002.

The problem with this virus is that it moves fast and is difficult to diagnose. Dozens of people become sick within a matter of hours, and by the time the lab results are in the patient is feeling better. Most people recover from the virus after a few days of acute gastroenteritis. Norovirus affects all age groups and is spread by direct person-to-person contact, consumption of contaminated food or water, airborne droplets of vomitus, and contact with contaminated environmental surfaces. An infectious dose can be as few as 10 viral particles. The disease is characterized most frequently by acute onset vomiting, watery nonbloody diarrhea and one or more of the following: abdominal cramps, nausea, fever, and/or headache. The most common complication in the young and elderly is dehydration. The illness usually last 12-60 hours. There is no specific therapy for Norovirus illness except fluid-loss replacement. Preventative measures include safe food and water, frequent and proper handwashing including turning off faucet handle and touching the bathroom door with paper towel, ensuring that ill foodhandlers do not work until well, and disinfection of sufaces by using at least a 1:50 solution of ordinary bleach.

The Communicable Disease Control Program investigates suspected Norovirus outbreaks to assess whether there is a community-wide or point source (foodborne) outbreak.

For more information, contact Monica O'Lenic at olenimt@co.mecklenburg.nc.us or 704.336.6436.

Sources:
http:www.cdc.gov/mmwr "Norovirus Activity—United States 2002"
www.ama-assn.org/sci-pubs "Norovirus outbreaks at all-time high nationwide"

Spox Vax Stage 1

North Carolina recently distributed 7,500 doses of Dryvax to be used in the first stage of the CDC's pre-event smallpox vaccination program. In this stage, public health investigation and immunization staff will be offered the vaccine. Those vaccinated will be responsible for investigating and/or immunizing suspected or confirmed cases of smallpox and their contacts.

Also in this first stage, each acute-care hospital in the state identified groups of health care workers that are to be vaccinated and trained to provide direct medical care for the first smallpox patients requiring hospital admission and to evaluate and manage patients who are examined at emergency departments with suspected smallpox.

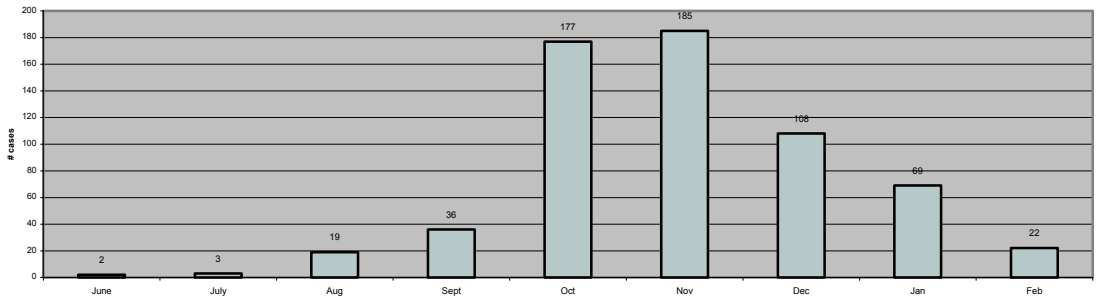
The vaccine is recommended for emergency department staff, intensive care unit staff including pediatricians and pediatric intensive care specialists, general medical unit staff, primary care house staff, infectious disease specialists, infection control professionals, respiratory therapists, radiology technicians, security personnel, and housekeeping staff.

The second stage of the vaccination plan is expected to begin within the next few months. During Stage 2, additional health and emergency service population will be vaccinated. Included in this stage are emergency medical services, HAZMAT, fire, and law enforcement. Vaccination of the general public is not planned at this time.

For more information, contact Lorraine Houser at houselm@co.mecklenburg.nc.us or 704.336.6438.

Shigella...The Numbers

Mecklenburg Shigella Case Numbers
June-February 2002-03*



*In database as of February 21, 2003

Courtesy of Susan Long-Marin.

For more information, contact Susan.Long-Marin@carolinashealthcare.org or 704.336.2900.

Reportable Diseases In North Carolina

Telephone reports are requested within 24 hours for diseases of unusual significance, incidence, or occurrence which may merit an epidemiological evaluation; and foodborne and waterborne outbreaks where a common source is suspected.

Telephone reports should include the following information:
disease; date of onset; patient name/address/phone number/age/race/sex; laboratory confirmation (yes or no); name and phone number of person making the report.

Report within 24 hours (by phone and card)

Anthrax
Botulism
Campylobacter infection
Chancroid
Cholera
Cryptosporidiosis
Cyclosporiasis
Diphtheria
E. coli, Shiga toxin-producing
Foodborne Disease
Gonorrhea
Granuloma Inguinale
H. Influenzae, Invasive Disease
HUS/Thrombotic Thrombocytopenic Purpura
Hepatitis A
Hepatitis B, Acute
Listeriosis
Measles (Rubeola)
Meningococcal Disease
Plague
Polio, Paralytic
Rabies, Human
Rubella
Salmonellosis
Shigellosis
Smallpox
Syphilis, All Stages
Tuberculosis
Tularemia
Typhoid, Acute
Vaccinia
Vibrio Infections
Viral Hemorrhagic Fever
Whooping Cough

Report within 7 days (by card)

AIDS
Brucellosis
Chlamydia
Dengue
Ehrlichiosis, Granulocytic
Ehrlichiosis, Monocytic
Encephalitas, Arboviral
Enterococci, Vancomycin resistant
Hantavirus Infection
Hepatitis B, Carrier
Hepatitis C, Acute
HIV infection
Legionellosis
Leptospirosis
Lyme Disease
Lymphogranuloma Venereum
Malaria
Meningitis, Pneumococcal
Mumps
Nongonococcal Urethritis
Psittacosis
Q Fever
Rocky Mountain, Spotted Fever
Rubella Congenital Syndrome
Streptococcal Infection, Group A, Invasive Disease
Tetanus
Toxic Shock Syndrome
Toxoplasmosis, Congenital
Transmissible Spongiform Encephalopathies (CJD/vCJD)
Trichinosis
Typhoid Carriage
Typhus, Epidemic louse-borne
Yellow Fever

Reporting Communicable Diseases – Mecklenburg County

To request N.C. Communicable Disease Report Cards, telephone 704.336.2817

Mark all correspondence "CONFIDENTIAL"

Tuberculosis:

TB Clinic 704.921.6170
Mecklenburg County Health Department FAX 704.921.6133
251 Eastway Drive
Charlotte, NC 28213

Sexually Transmitted Diseases, HIV, & AIDS:

Regional Office HIV/STD Surveillance 704.336.6480
Mecklenburg County Health Department FAX 704.336.6200
700 N. Tryon Street, Suite 214
Charlotte, NC 28202

All Other Reportable Communicable Diseases including Viral Hepatitis A, B & C:

Report to any of the following nurses:

Shannon Gilbert, RN 704.353.1270
Nancy Hill, RN, 704.336.5498
Jane Hoffman, RN, 704.336.5490
Lorraine Houser, RN 704.336.6438
Monica O'Lenic, RN 704.336.6436
Elizabeth Quinn, RN 704.336.5398
Communicable Disease Control FAX 704.353.1202
Mecklenburg County Health Department
700 N. Tryon Street, Suite 271
Charlotte, NC 28202

Animal Bite Consultation / Zoonoses / Rabies Prevention:

Al Piercy, RS 704.336.6440
Communicable Disease Control FAX 704.353.1202
Mecklenburg County Health Department
700 N. Tryon Street, Suite 272
Charlotte, NC 28202
or State Veterinarian, Lee Hunter, DVM 919.733.3410
State after hours 919.733.3419

Child Daycare Nurse Consultant:

Gail Mills, RN 704.336.5076
Communicable Disease Control FAX 704.353.1202
Mecklenburg County Health Department
700 N. Tryon Street, Suite 271
Charlotte, NC 28202

Suspected Food borne Outbreaks / Restaurant, Lodging, Pool and Institutional Sanitation:

Food & Facilities Sanitation 704.336.5100
Mecklenburg County Health Department FAX 704.336.5306
700 N. Tryon Street, Suite 208
Charlotte, NC 28202

Mecklenburg County Health Department

Spox Vax Facts

The U.S. military reports several noteworthy adverse reactions among the more than 100,000 troops and 8,000 medical personnel who have received the smallpox vaccine since December 2002. No deaths have been reported. The side effects reported have been as follows:

★1%—5% of those vaccinated have had mild symptoms including fever, malaise, pruritus, and swollen lymph nodes.

★2 army soldiers were diagnosed with encephalitis within a week to 12 days of receiving a smallpox vaccination. The cases have not been definitely linked to the vaccine. Both soldiers were hospitalized and recovered fully and were back on active duty with no long-term sequelae.

★Myocarditis was diagnosed in an Air Force member who was hospitalized after going to an emergency room with chest pain. The patient was discharged after 2 days and has had no long-term sequelae.

★Mild conditions that may qualify as generalized vaccinia developed in 6 members of the military. These members were treated as outpatients and the civilian health advisors have suggested that the rashes were so mild that they may not meet the "true" definition of generalized vaccinia.

★A soldier developed redness in the eyes and was diagnosed with possible ocular vaccinia. However, laboratory tests did not find vaccinia in the eye. The soldier was treated as an outpatient with antiviral eye drops and appears to have no long-term complications.

★In California, an adult's eye became infected with the same virus used in the military's smallpox vaccination program. Apparently the patient had been in close contact with a recently vaccinated person. This is the first known case linked to the national drive to vaccinate emergency health workers and military personnel.

During the civilian smallpox vaccination program, CDC and state health departments are conducting surveillance for vaccine-associated adverse events. The following adverse events have been documented thus far:

★In Florida, officials are investigating 3 health care workers who became ill after receiving the vaccine. Only one appears to have had an adverse reaction to the vaccine. This reaction was reported in a 39-year-old woman with a suspected case of generalized vaccinia. The patient developed increased pain at the vaccination site, malaise, and headache 9 days after receiving the smallpox vaccine. The woman was treated as an outpatient with antihistamines and the rash was resolving by day 15. The other 2 experienced symptoms not normally related to the inoculations.

The most common side effects reported thus far have been fever, pruritus, rash, vasodilatation, asthenia, headache/migraine, malaise, and parasthesia. Some vaccinees reported multiple signs and symptoms.

Reference:
CDC. MMWR. February 28, 2003. Vol 52 (No.8) *Smallpox vaccine adverse events among civilians-United States, February 18-24, 2003*
http://www.medscape.com/viewarticle/449439;
http://www.nytimes.com; *Patient Has Smallpox Related Infection*

New Reportable Condition

Effective February 13, 2003, Vaccinia Disease became reportable to the Health Department WITHIN 24 HOURS.

The North Carolina General Statute defines the following:

1)The Centers for Disease Control and Prevention (CDC) shall dictate the guidelines and recommended actions for prevention of the spread of smallpox and for prevention of the spread of vaccinia

2) The attending physician of a person vaccinated against smallpox shall report to the local health department the existence of any following:

- ★ Auto-innoculation
- ★ Generalized vaccinia
- ★ Eczema vaccinatum
- ★ Progressive vaccinia
- ★ Post vaccination encephalitis

The attending physician shall make the report to the local department within 24 hours. The local health department shall notify the Division of Public Health within 24 hours.

3) The physician responsible for vaccinating a person against smallpox and the physician diagnosing a person with vaccinia disease shall instruct the patient to follow the CDC guidelines for the prevention of the spread vaccinia. The patient shall follow the guidelines.

4) The State Health Director or local health director may use **isolation authority** pursuant to the North Carolina General Statute when necessary to prevent the spread of smallpox or vaccinia virus.

CDC guidelines can be found at the CDC website: www.bt.cdc.gov/agent/smallpox/

For more information, contact Monica O'Lenic at olenimt@co.mecklenburg.nc.us or 704.336.6436.

This periodical is written and distributed quarterly by the Communicable Disease Control Program of the Mecklenburg County Health Department for the purpose of updating the medical community in the activities of Communicable Disease Control. Program members include: Health Director—Peter Safir; Medical Director—Dr. Stephen R. Keener; Director, CD Control—Carmel Clements; Program Chief—Wanda Locklear; CD Control nurses—Shannon Gilbert, Nancy Hill, Jane Hoffman, Lorraine Houser, Monica O'Lenic, Elizabeth Quinn; TB Outreach nurses—Marcia Frechette (also Adult Day Health), Faye Lilieholm; Child Care nurse—Gail Mills ; Rabies/Zoonosis Control—Al Piercy; ; Program Chief STD/HIV Surveillance—Carlos McCoy; Syphilis Coordinator— Ann White; DIS—Mary Ann Curtis, Michael Rogers, Lavon Sessoms; Regional Surveillance Team—Bobby Kennedy, Belinda Worsham; Office Assistants—Linda Kalman, Lisa Liner.

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Communicable Disease Control UPDATE

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